

Claims

- [c1] What is claimed is:
1. An identifiable TAB disposed on an inkjet cartridge, comprising:
a flexible substrate;
a plurality of conductive traces formed on the flexible substrate; and
a plurality of contacts formed on the flexible substrate and connected to the conductive traces;
wherein the contacts are arranged into at least one identifiable area.
 - [c2] 2. The identifiable TAB according to claim 1, wherein the identifiable area comprises an identifiable mark.
 - [c3] 3. The identifiable TAB according to claim 2, wherein the identifiable mark is a trademark or a brand name.
 - [c4] 4. An inkjet print cartridge, comprising:
a casing having an ink reservoir for containing N types of ink, each type of ink having a different color, wherein N is an integer; and
a TAB assembled to the casing, comprising:
a flexible substrate;

a plurality of conductive traces formed on the flexible substrate; and
a plurality of contacts formed on the flexible substrate and connected to the conductive traces, wherein the contacts are arranged into N types of identifiable areas, wherein the identifiable areas are associated with the colors of ink in the ink reservoir.

[c5] 5. The inkjet print cartridge according to claim 4, wherein N equals 1.

[c6] 6. The inkjet print cartridge according to claim 4, wherein N equals 3.

[c7] 7. The inkjet print cartridge according to claim 4, wherein the identifiable areas are texts which represent the colors of ink respectively.

[c8] 8. A method of identifying the colors of ink contained in an inkjet cartridge by an identifiable TAB, comprising the steps of:
providing at least one inkjet cartridge, the inkjet cartridge comprising:
a casing having an ink reservoir for containing N types of ink with different colors, wherein N is an integer; and
an identifiable TAB disposed to the casing, the TAB comprising:

a flexible substrate;
a plurality of conductive traces formed on the flexible substrate; and
a plurality of contacts formed on the flexible substrate and connected to the conductive traces, wherein the contacts are arranged into N types of identifiable areas;
and
identifying at least N types of ink in the ink reservoir, wherein N types of ink have different colors, and the identifiable areas are associated with the colors of ink.

[c9] 9. The method according to claim 8, wherein N equals 1.

[c10] 10. The method according to claim 8, wherein N equals 3.

[c11] 11. The method according to claim 8, the identifiable areas are texts which represent the colors of ink respectively.

[c12] 12. The method according to claim 8, wherein the colors of ink are selected from the group consisting of black, cyan, magenta, yellow, light black, light cyan, light magenta, light yellow, orange, green, light orange, and light green.

[c13] 13. An identifiable TAB disposed to an inkjet cartridge containing N types of ink with different colors, wherein N

is an integer, the TAB comprising:
a flexible substrate;
a plurality of conductive traces formed on the flexible substrate; and
a plurality of contacts formed on the flexible substrate and connected to the conductive traces, wherein the contacts are arranged into N types of identifiable areas, wherein the identifiable areas are associated with the colors of ink in the inkjet cartridge.

- [c14] 14. An inkjet apparatus, comprising:
a carriage equipped with a flexible circuit board (FCB);
a first flexible TAB and a second flexible TAB respectively disposed in a first inkjet cartridge and a second inkjet cartridge electrically coupling to the FCB on the carriage, the first inkjet cartridge and the second inkjet cartridge respectively having a first plurality of contacts and a second plurality of contacts, wherein the first contacts and the second contacts are arranged into a first identifiable area and a second identifiable area, wherein the first identifiable area and the second identifiable area are associated with the colors of ink stored in the first inkjet cartridge and the second inkjet cartridge;
a first sensor, disposed in the carriage for detecting the first identifiable area and sending a first signal;
a second sensor, disposed in the carriage for detecting

the second identifiable area and sending a second signal;
and
a control unit for receiving the first signal and the second signal, and determining whether the first inkjet cartridge and the second inkjet cartridge are correctly placed.

[c15] 15. The inkjet apparatus according to claim 14, wherein the control unit sends a warning signal to alert a user when the first inkjet cartridge or the second inkjet cartridge is misplaced.

[c16] 16. The inkjet apparatus according to claim 14, wherein the carriage is equipped with a first FCB and a second FCB, wherein the first FCB and the second FCB are electrically coupled to the first flexible TAB of the first inkjet cartridge and the second flexible TAB of the second inkjet cartridge, respectively.

[c17] 17. The inkjet apparatus according to claim 16, wherein the first sensor and the second sensor are positioned at the first TAB and the second TAB, respectively.

[c18] 18. The inkjet apparatus according to claim 14 further comprising a housing, wherein the first sensor and the second sensor are disposed in an inside wall of the housing.

- [c19] 19. The inkjet apparatus according to claim 14, wherein the first identifiable area and the second identifiable area are formed at the first flexible TAB of the first inkjet cartridge and the second flexible TAB of the second inkjet cartridge, respectively.
- [c20] 20. The inkjet apparatus according to claim 14, wherein the first inkjet cartridge has a first surface and the second inkjet cartridge has a second surface, and the first identifiable area and the second identifiable area are located at the first surface and the second surface, respectively.
- [c21] 21. The inkjet apparatus according to claim 14, wherein the first signal and the second signal are wirelessly transmitted between the control unit, the first sensor and the second sensor.
- [c22] 22. The inkjet apparatus according to claim 14, wherein the first identifiable area and the second identifiable area are texts which represent the colors of ink respectively.
- [c23] 23. A method of preventing misplacing inkjet cartridge, adapted for an inkjet apparatus, the inkjet apparatus comprising:
a carriage equipped with a first inkjet cartridge and a second inkjet cartridge; and

the first inkjet cartridge and the second inkjet cartridge respectively having a first plurality of contacts and a second plurality of contacts, wherein the first contacts and the second contacts are arranged into a first identifiable area and a second identifiable area, and the first identifiable area and the second identifiable area are associated with the colors of ink stored in the first inkjet cartridge and the second inkjet cartridge;

the method comprising the steps of:

detecting the first identifiable area and the second identifiable area;

sending a first signal and a second signal;

receiving the first signal and the second signal; and

determining whether the first inkjet cartridge and the second inkjet cartridge are correctly placed.

[c24] 24. The method according to claim 23, further comprising a step of sending a warning signal to alert a user while the first inkjet cartridge or the second inkjet cartridge is misplaced.

[c25] 25. The method according to claim 23, wherein the first inkjet cartridge has a first flexible TAB and the second inkjet cartridge has a second flexible TAB, the first flexible TAB and the second flexible TAB electrically coupling to the FCB on the carriage, wherein the first identifiable area and the second identifiable area are disposed at the

first flexible TAB and the second flexible TAB, respectively.

- [c26] 26. The method according to claim 23, wherein the first inkjet cartridge has a first surface and the second inkjet cartridge has a second surface, wherein the first identifiable area and the second identifiable area are located at the first surface and the second surface, respectively.
- [c27] 27. An inkjet apparatus, having a carriage equipped with at least an inkjet cartridge, the inkjet cartridge having a plurality of contacts are arranged into an identifiable area, and the identifiable area is associated with the colors of ink stored in the inkjet cartridge, the inkjet apparatus comprising:
a sensor for detecting the identifiable area and sending a signal; and
a control unit for receiving the signal and determining whether the inkjet cartridge is correctly placed.
- [c28] 28. The inkjet apparatus according to claim 27, wherein the sensor is a charged coupling device (CCD).
- [c29] 29. The inkjet apparatus according to claim 27, wherein the sensor is a contact image sensor (CIS).
- [c30] 30. The inkjet apparatus according to claim 27, wherein the sensor is disposed in the carriage.

- [c31] 31. The inkjet apparatus according to claim 27 further comprising a housing, wherein the sensor is disposed in an inside wall of the housing.
- [c32] 32. The inkjet apparatus according to claim 27, wherein the inkjet cartridge further comprises a flexible TAB, and the contacts are disposed on the flexible TAB.
- [c33] 33. The inkjet apparatus according to claim 27, wherein the inkjet cartridge further comprises a surface and the contacts is disposed on the surface of the inkjet cartridge.
- [c34] 34. The inkjet apparatus according to claim 27, wherein the signal is wirelessly transmitted between the control unit and the sensor.
- [c35] 35. A method of preventing misplacing inkjet cartridge, adapted for an inkjet apparatus, the inkjet apparatus having a carriage equipped with an inkjet cartridge, the inkjet cartridge having a plurality of contacts are arranged into an identifiable area, wherein the identifiable area is associated with the colors of ink stored in the inkjet cartridge, the method comprising the steps of:
detecting the identifiable area;
sending a signal;
receiving the signal; and

determining whether the inkjet cartridge is correctly placed.

- [c36] 36. The method according to claim 35, further comprising a step of sending a warning signal to alert a user while the inkjet cartridge is misplaced.
- [c37] 37. The method according to claim 35, wherein the inkjet cartridge has a flexible TAB, and the contacts are disposed on the flexible TAB.
- [c38] 38. The method according to claim 35, wherein the inkjet cartridge has a surface and the contacts are disposed on the surface.